

1. INTRODUCTION

In accordance with the Energy Reorganization Act of 1974 (42 U.S.C. 5801), the U.S. Department of Energy (DOE) established the Solar Energy Research Institute (SERI) in 1977. SERI was designated as a national laboratory and became the NREL in 1991. The National Renewable Energy Laboratory (NREL) was established to support DOE's mission to research and develop energy efficiency and renewable energy technologies. Among other responsibilities, NREL oversees the NWTC located in Jefferson County, Colorado. The NWTC is a federally owned, contractor-operated site.

In accordance with the DOE NEPA regulations, DOE is required to evaluate the existing Site-Wide EA every five years to determine whether the Site-Wide EA adequately addresses current agency plans, functions, programs and resource utilization. A Site-Wide EA for the NWTC was published in 1996 (DOE-EA-1127). DOE has determined that a new comprehensive EA should be prepared for the site to address new site development proposals and changes in the regional environment.

In compliance with the NEPA (42 U.S.C. 4321) and DOE's NEPA implementing regulations (10 CFR section 1021.330), this Site-Wide EA examines the potential environmental impacts of site operations, a short-term and long-term program of improvements at the NWTC, and a No Action alternative.

DOE is the lead agency for this EA, and other federal, state, and local agencies and the public have been invited to participate in the environmental documentation process.

1.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action is to support DOE's mission in the research and development of energy efficiency and renewable energy technologies. DOE's Office of Energy Efficiency and Renewable Energy (EERE) leads the national research effort to develop clean, competitive, and reliable renewable energy and power delivery technologies for the 21st century. The program supports research and development of clean, reliable renewable energy technologies. The goal of the program is to improve the Nation's overall economic strength and competitiveness, energy security, and environmental health through the development of clean, competitive, and reliable power technologies.

Alternative energy technology research is needed to improve technical designs, improve power generation efficiencies, increase economic competitiveness, and fully characterize and minimize environmental impacts from various technologies. The EERE research and development program focus areas include, but are not limited to, bioenergy, wind, hydrogen, hydropower, geothermal, and solar energy technologies. NWTC is EERE's and the Nation's principal research site for wind power and distributed energy resources.

The mission of EERE's Wind Energy Program is to help the United States attain the substantial economic, environmental and energy security benefits likely to result from expanding the domestic and worldwide use of wind energy by fostering a world-class, domestic wind industry. The program focuses on research, testing and field verification work needed by U.S. industry to fully develop advanced wind energy technologies, and on coordination with partners and